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ABSTRACT

A pilot study was conducted with 48 adults to determine if career indecision/dissatisfaction as indicated by flat Strong Interest Inventory (SII) (L. Harmon, J. Hansen, F. Borgen, and A. Hammer, 1994) profiles corresponded with flat profiles on the Self-Directed Search (SDS) and to determine if indecision affected scores on SII Personal Style scales and on achievement. There was significant agreement between flat and elevated profiles on the SII and on the SDS. Multiple regression analysis found that several of the SI General Occupational Theme scales predicted scores on the SII Personal Style scales. There were, however, no meaningful differences in Personal Style mean scores between people experiencing career indecision/dissatisfaction represented by flat and elevated profiles on the SII, nor were there meaningful differences on Wide Range Achievement Test-3 (G. Wilkinson, 1993) scale means. Spelling achievement was related to Learning Environment on the SII Personal Style Scale. Future directions for study are provided. Contains 10 references. (Author/SLD)

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The Influence of Career Indecision on the Strong Interest Inventory and the Self-Directed Search: A Pilot Study

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Abstract

A pilot study was conducted with 48 adults to determine if career indecision/dissatisfaction as indicated by flat Strong Interest Inventory (SII) profiles corresponded with flat profiles on the Self-Directed Search (SDS) and to determine if indecision affected scores on SII Personal Style scales and on achievement. There was significant agreement between flat and elevated profiles on the SII and to those on the SDS. Multiple regression analysis found that several of the SII General Occupational Theme scales predicted scores on the SII Personal Style scales. There were however no meaningful differences in Personal Style mean scores between people experiencing career indecision/dissatisfaction represented by flat and elevated profiles on the SII, nor were there meaningful differences on Wide Range Achievement Test-3 (WRAT-3) scale means. Spelling achievement was related to Learning Environment on the SII Personal Style Scale. Future directions for study are provided.

The Influence of Career Indecision on the Strong Interest Inventory and the Self-Directed Search: A Pilot Study

Within the past 20 years, career indecision has received significant study in the field of vocational development, particularly regarding developmental and personality correlates of indecision such as anxiety, identity confusion, and external locus of control (Borgen, 1991). The effects, however, of career indecision on the measurement of career interests have received only limited study. Developers of the Strong Interest Inventory indicated that students exhibiting career dissatisfaction, which is construed as a result of career indecision, tend to have suppressed scores (flat profiles), that is, none of the six General Occupational Theme (GOT) scales have scores higher than "average interest" which are at or below the 75th percentile (Hansen & Campbell, 1985; Hartman, Hansen, Borgen, & Hammer, 1994). Their conclusion is that persons faced with significant dissatisfaction have difficulty even ascertaining their own area(s) of occupational interest due to the pervasiveness of the dissatisfaction. Little empirical evidence is offered to substantiate their conclusions except for one study involving a narrow sample of adult children of alcoholics which indicated that undecided subjects obtained flat profiles on the Strong (Schumrum & Hartman, 1988).

The Self-Directed Search (SDS), which is another measure of the six Holland code types (that is, the GOT scales), is highly correlated with the Strong, and yet only one study involving career indecision and the SDS has been conducted. Findings indicated that vocational education students exhibiting career indecision as measured by the Career Decision Scale (CDS) tended to have lower SDS indexes on Holland's secondary personality characteristics of congruence, consistency, differentiation, and coherence but no significant effects were found among the six

GOT scales (Conneran & Hartman, 1993). In addition, while there is good support for the similarity of Strong and SDS scores, no studies have been conducted comparing flat profiles of the Strong to SDS profiles; therefore, whether or not respondents with flat Strong profiles will obtain flat SDS profiles is unclear.

A final justification for the current study is that the Strong has recently undergone significant renorming in addition to restructuring of several occupational and special scales. The most notable change has been the deletion of the Academic Comfort Scale and the Introversion-Extroversion Scale of the 1985 edition. In place of these two special scales, four Personal Style Scales have been created: Work Style, Learning Environment, Leadership Style, and Risk Taking/Adventure. While studies of the 1985 edition revealed that flat profiles correlated with low scores on Academic Comfort scores, no research has been published regarding the effects of career indecision on the four new special scales of the 1994 revision. Finally, some research findings indicated that achievement may be related to Academic Comfort, but whether achievement relates to the Personal Style scales, especially Learning Environment, is unclear.

The current project is a pilot study to determine the degree to which career dissatisfaction and/or indecision as indicated by a flat profile on the Strong Interest Inventory relates to Self-Directed Search scores. That is, will a flat SII profile correspond to a flat SDS profile? Second, the study will also determine the relationship between the six GOT scales to the four Personal Style scales of the Strong, that is, are any of the GOT scales predictors of Personal Style preferences? In addition, are there meaningful differences in Personal Style mean scores between people experiencing career indecision/dissatisfaction represented by flat and elevated profiles? Third, Wide Range Achievement Test-3 (WRAT-3) scores will be administered to determine if academic achievement is related to career indecision/dissatisfaction as indicated by flat profiles

measured by the Strong, and to determine if achievement is related to the Personal Style scores, particularly Learning Environment.

Method

Subjects

Subjects were 48 adults (28 males and 20 females) who volunteered for vocational assessment and counseling because of career dissatisfaction or indecision. Assessments were conducted by graduate students as partial fulfillment of course requirements for a career counseling course in a southern university. The accuracy of scoring was proofed by the instructor. Subjects ranged from 17 to 49 years of age (X_{age}= 27.6, sd_{age}=9.5) and 10 to 18 years of education (X_{educ}=14.2, sd_{educ}=2.2). Of these, 26 took both the Strong and the SDS, while 22 completed only the Strong.

Instruments

Self-Directed Search. The Self-Directed Search is a 228-item self-administered and self-scored interest inventory designed to measure a person's career personality type according to Holland's theory (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional). Respondents rate likes or dislikes for each of the six Holland personality types on four subscales, Activities, Competencies, Occupations, and Abilities, and scores are derived by summing the total number of likes and the self-rating of abilities for each respective Holland category. Once a person's career profile has been obtained, the Occupations Finder is used to compare the personality type to occupations with similar profiles. Internal consistency reliability estimates for the summary scale range from .84 to .92, whereas ranges for the subscales are .59 to .92 (Campbell, 1988). A significant body of evidence has been accumulated in demonstrating good concurrent and predictive validity.

There are no interest level designators such as "Average", "High", etc.; therefore, to be consistent with the Strong, scale scores below the 76th percentile were considered to be no higher than "Average," therefore, to be consistent with the Strong scoring system, subjects with none of the SDS scales higher than the 75th percentile were considered to have flat profiles.

Strong Interest Inventory. The Strong Interest Inventory (SII) is composed of 317 items from which the respondent indicates his or her preferences regarding vocational interests (Harmon, Hansen, Borgen, & Hammer, 1994). Computer scoring of the items yields four types of scales based on reported interest. The General Occupational Theme (GOT) scales correspond directly with Holland's six career personality types. Within each GOT category, are several Basic Interest Scales (BIS) which reveal more specific interests within the respective GOT. The third scale is comprised of specific occupations within their corresponding BIS scales. Separate from these three scales is the Personal Style Scales designed to help users identify preferred work environments, learning styles, leadership styles, and risk-taking preference. Reliability estimates are quite good for the SII (Hammon et al., 1994). Internal consistency values for the GOT range from .90 to .94 with test-retest values range from .84 to .92. For the BIS, internal consistency reliability estimates range from .74 to .94 whereas test-retest correlations range from .66 to .93. Validity studies for the SII have generally shown the instrument to have good concurrent and predictive validity across numerous samples. Subjects were considered to have a flat profile if none of the six GOT code types were above "Average", that is, no scale was indicated as "High" or "Very High" interest (76th percentile or higher).

Wide Range Achievement Test--Revision 3. The Wide Range Achievement Test--Revision 3 is a widely used instrument measuring achievement in reading, spelling, and arithmetic for individuals age 5 to 64 years. Scores for each of the three subject areas include the percentile,

grade equivalent, and standard score (mean = 100, sd = 15). Coefficient alphas for the combined tests range from .92 to .95. Test-retest values were reported as ranging from .91 to .98. Content validity studies have been positive (Wilkinson, 1993).

Results

Analysis 1

Classification comparisons of the 26 subjects who completed both the Strong and the SDS indicated that 7 of the 9 subjects with flat Strong profiles had corresponding flat SDS profiles based on a 75th percentile cutoff for SDS scores derived from the 1994 normative sample (see Table 1). Conversely, of the remaining 17 subjects with elevated Strong profiles, 13 had elevated SDS profiles and four had flat SDS profiles; therefore, the rate of agreement between the Strong and the SDS on profile type, i.e., flat versus elevated, was 20 of 26 (76.9%). Age and education between the two groups did not differ significantly on *t*-tests.

Analysis 2

Separate multiple regression analyses of the six GOT scales to the four Personal Style scales were conducted using all subjects (see Table 2). Results indicated that Social and Enterprising scales were positively correlated to Work Style, whereas Realistic and Investigative scales were negatively correlated (model $F_{4,29} = 62.93$, $p_{calc}=.000$, adj. $R^2=.882$). For Learning Environment, Investigative and Artistic scales were positively correlated, while Conventional was negatively correlated (model $F_{3,30}= 10.21$, $p_{calc}=.000$, adj. $R^2=.456$). For Leadership Style, Social and Enterprising scales were positively correlated (model $F_{2,31} = 15.89$, $p_{calc} =.000$, adj. $R^2 =.474$). For Risk-Taking Style, the Realistic scale was positively correlated while the Conventional scale was negatively correlated (model $F_{2,31} =8.90$, $p_{calc} =.001$, adj. $R^2 =.324$). Moreover, *t*-tests of Personal Style scale scores indicated that while the flat-profile group had lower mean scores on all four

scales, none were statistically significant (see Table 3).

Analysis 3

Separate multiple regression analyses of the three WRAT-3 scales to the four Personal Style scales were conducted (see Table 4). Results indicated that only WRAT-3 Spelling scores correlated with the Learning Style scale but the amount of variance predicted was small (model $F_{1,38} = 4.17$, $p_{calc} = .048$, adj. $R^2 = .075$). Separate *t-tests* of WRAT-3 scores between flat versus non-flat Strong profiles did not demonstrate any statistical significance (see Table 5).

Discussion

In classification comparison of flat vs. non-flat profiles, it appeared that flat Strong Interest Inventory (SII) profiles do correspond with flat profiles on the Self-Directed Search (SDS). That is, those experiencing career indecision/dissatisfaction as indicated by flat SII profiles will tend to have flat profiles on the SDS as well. A review of the literature did not indicate whether or not such an interpretation was appropriate, yet the danger is that clinicians may interpret the two or three highest scores on the SDS as representative of career interests when indeed the entire profile should be considered flat and thereby indicative of career indecision/dissatisfaction.

In determining if any of the six GOT scales was related to the four Personal Style Scales for all subjects, regression analyses yielded important relationships among the scales. First, Social and Enterprising scales were positively correlated with Work style, whereas Realistic and Investigative scores were negatively correlated. Because higher values on Work style indicate preference to working with people or as a part of a team, and lower scores suggest a preference to work alone or with things and data, these four relationships are not surprising. The model accounted for over 88% of the variance in Work Style scores which indicates a very good fit among the predictors with little intercorrelation.

Second, Learning Environment was positively correlated with Investigative and Artistic scales whereas Conventional was negatively correlated. High Learning Environment scores are typically obtained by persons who enjoy an academic environment and enjoy learning for knowledge sake. Low scores indicate a preference for hands on learning and training to achieve specific goals. Investigative and Artistic people obviously enjoy learning and studying for the sake of gaining knowledge moreso than Conventional types who seem to prefer more practical learning.

Third, a positive correlation with Leadership Style was observed with Social and Enterprising scales, thereby indicating that these two career personality types are comfortable initiating action, taking charge, and motivating others.

Finally, two Strong Interest GOT scales, Realistic and Conventional, were significantly predicted Risk-taking preference. Realistic was positively correlated with Risk-taking which suggested that high scorers on Realistic were more likely to enjoy adventure and thrilling activities. Conventional was negatively correlated, therefore those with high Conventional scores tend to prefer safe, less risky activities.

Regression analyses of WRAT-3 scales to the four SII Personal Style Scales indicated that only WRAT Spelling had any predictive value with Learning Style. In these data, higher spelling scores correlated with more of a preference for taking charge and motivating others; however, the amount of variance predicted by the model was small ($R^2 = 7.5\%$) thereby suggesting a weak predictive relationship. Achievement, therefore, does not appear to have any significant bearing on the Personal Style Scales of the Strong. In addition, none of the difference in WRAT-3 scale mean scores between flat and non-flat profiles was statistically significant; therefore level of achievement between the two groups was not different. This would suggest that career indecision/dissatisfaction is independent of achievement.

This pilot study has significant limitations and the conclusions msut be viewed conservatively. Certainly the sample size is quite limited and the numerous exploratory type analyses would probably inflate the risk of Type I error. The study does, however, illuminate areas of further study. First, replication of all findings is required in order to determine the generalizability of the results across various samples. Second, additional study should be conducted to better determine the cutting score which best differentiates flat profiles from elevated profiles on the SDS given that further replications find similar agreement between SII and SDS flat profiles. The current study used the 75th percentile as the cutting score for flat profiles on the SDS because this was the convention used on the SII, however, this does not necessarily mean that this is the optimal cutting score. Third, more objective measures of career indecision/dissatisfaction are critical in validating the utility of interpreting flat profiles as indicators of career indecision.

References

Borgen, F. H. (1991). Megatrends and milestones in vocational behavior: A 20-year counseling psychology retrospective. Journal of Counseling Psychology, 39, 263-290.

Campbell, N. J. (1988). Self-Directed Search. In J. Kapes, & M. Mastie (Eds.), A Counselor's Guide to Career Assessment Instruments (2nd ed., pp. 116-120). Alexandria, VA: National Career Development Association.

Conneran, J. M., & Hartman, B. W. (1993). The concurrent validity of the Self Directed Search in identifying chronic career indecision among vocational education students. Journal of Career Development, 19, 197-208.

Hansen, J. C., & Campbell, D. P. (1985). Manual for the Strong Interest Inventory (4th ed). Stanford, CA: Stanford University Press.

Harmon, L. W., Hansen, J. C., Borgen, F. H., & Hammer, A. L. (1994). Strong Interest Inventory: Applications and Technical Guide. Palo Alto, CA: Consulting Psychologists Press.

Holland, J. L. (1985a). The Self-Directed Search professional manual. Odessa, FL: Psychological Assessment Resources.

Holland, J. L. (1985b). Making vocational choices: A theory of careers (2nd ed). Englewood Cliffs, NJ: Prentice Hall.

Osipow, S. H. (1982). Career decision scale manual. Odessa, FL: Psychological Assessment Resources.

Schumrum, T., & Hartman, B. W. (1988). Adult children of alcoholics and chronic career indecision. Career Development Quarterly, 37, 118-126.

Wilkinson, G. S. (1993). Wide Range Achievement Test-3 administration manual. Wilmington, DE: Jastak.

Table 1.

Classification agreement between flat and elevated profiles on the Strong Interest Inventory and the Self-Directed Search.

		Strong Interest Inventory		
		Flat	Elevated	
Self-Directed Search	Flat	7	4	11
	Elevated	2	13	15
		9	17	26

Table 2.

Regression analyes of Strong Interest Inventory GOT Scales as predictors of Personal Style Scale scores.

Work Style Scale			
Variable	**Coefficient (B)**	**Std. Error**	p_{calc}
constant	28.100	6.016	.000
Realistic	-0.323	0.087	.001
Investigative	-0.212	0.085	.019
Social	0.529	0.060	.000
Enterprising	0.455	0.071	.000

Table 2 (continued).

Learning Environment			
Variable	**Coefficient (B)**	**Std. Error**	**p_{calc}**
constant	11.403	10.315	.278
Investigative	0.371	0.150	.020
Artistic	0.556	0.118	.000
Conventional	-0.254	0.141	.082

Leadership Style			
Variable	**Coefficient (B)**	**Std. Error**	**p_{calc}**
constant	2.073	8.443	.808
Social	0.425	0.119	.001
Enterprising	0.483	0.149	.003

Risk Taking/Adventure			
Variable	**Coefficient (B)**	**Std. Error**	**p_{calc}**
constant	42.289	14.301	.006
Realistic	0.547	0.190	.007
Conventional	-0.300	0.177	.099

Table 3.

Means and standard deviations of flat and elevated profiles on Strong Interest Inventory Personal Style Scales

Profile	n	Work	Learning	Leadership	Risk Taking
flat	6	48.50 (12.85)	39.50 (10.80)	43.17 (16.76)	50.33 (11.55)
elevated	35	55.66 (9.78)	43.11 (10.29)	49.86 (9.93)	52.86 (11.24)

Table 4.

Regression analyes of Achievement on the WRAT-3 as predictors of Strong Interest Inventory Personal Style Scale scores.

Learning Environment			
Variable	**Coefficient (B)**	**Std. Error**	**p_{calc}**
constant	20.154	11.18	.079
WRAT Spelling	0.221	0.108	.048

Table 5.

Means and standard deviations of flat and elevated profiles on WRAT-3 Scales.

Profile	n	Reading	Spelling	Arithmetic
flat	9	110.89 (5.37)	103.33 (9.80)	102.33 (16.16)
elevated	37	105.51 (12.70)	102.62 (14.96)	98.38 (17.19)